

Understanding and Treating Lymphedema

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Swelling is a common symptom and complaint encountered frequently by bodyworkers and therapist. Swelling has become a catch-all term, whether it be swelling from an injury, cardiovascular or renal compromise, or an increase in size from lymphatic sources. When edema is caused by inadequate lymph drainage, it is referred to as lymphedema. Differences can be confusing when differentiating between edema, lymphedema, and swelling. These terms are often incorrectly interchangeable. Understanding what each term actually implies is necessary before appropriately treating your client's issues. These are very simplified definitions:

"*Swelling* is an increase in the size or a change in the shape of an area of the body. Swelling can be caused by collection of body fluid, tissue growth, or abnormal movement or position of tissue." (WebMD)

"*Lymphedema* occurs when lymphatic fluid builds up in the soft tissues of your body, usually in an arm or leg." (Society for Vascular Surgery)

"*Edema* is an abnormal collection of fluid in spaces between cells, especially just under the skin or in a given cavity or organ." (Barron's Dictionary of Medical Terms)

Lymphedema should not be confused with edema resulting from venous insufficiency. However, untreated venous insufficiency (edema) can progress into a combined venous/lymphatic disorder which is treated similar to lymphedema.

Edema

When a blood vessel's outward force is greater than the inward force, fluid moves out of the capillaries by osmosis. In situations where venous drainage is hampered -- as in varicose veins -- there is damming up of blood in the venules and capillaries. This situation also increases the hydrostatic pressure with resultant edema. Any condition causing an increased outward force results in edema. The more frequent causes are: *Gravity*. Standing or sitting with the legs down a long time can cause blood to pool in the leg veins, which increases the capillary hydrostatic pressure, and increases the blood vessel's outward force.

Malnutrition. Protein deficiencies, in particular, can cause a decrease in capillary osmotic pressure, which reduces the inward force. This changes the balance of pressures and results in a greater outward force. This greater outward force draws fluid out of the blood vessel, resulting in edema.

Lymphedema

Lymphedema results when lymph flow does not match lymph production. It is classified as either primary or secondary. Primary lymphedema is a congenital malformation in the lymphatic system in which lymphatic vessels are missing or impaired. Secondary lymphedema is more common, occurs after birth, and is due to problems occurring in the lymphatic system, such as lymph vessel damage or lymph node removal. If lymph nodes are removed, there is always a risk of developing lymphedema. Secondary lymphedema can develop immediately post-operatively, or weeks, months, or years later. Common causes of secondary lymphedema may include:

Surgeries to remove vessels or lymph nodes

Radiation therapy; chemotherapy side effects

Lymph vessels and nodes affected by metastatic cancer

Scarring of lymph vessels and nodes secondary to infections or surgeries

Trauma or injuries

Filariasis, which is a parasitic infestation

Aircraft flight has also been linked to the onset of lymphedema in patients after cancer surgery (due to the decreased cabin pressure).

Another cause of lower extremity lymphedema is that resulting from the use of Tamoxifen. This medication has been linked to blood clots and subsequent DVT (deep venous thrombosis).

Early symptoms of Lymphedema

A feeling of tightness and decreased flexibility

Skin that looks shiny, has fewer folds and feels taut

Difficulty moving a limb or bending at a joint due to swelling and skin tightness

Tight fitting of jewelry, clothing or footwear

Swelling of only one foot or arm

Weakness, pain, aching or heaviness in the arm, legs, or feet

Pitting (when fingertips press the swollen tissue, the area indents and holds the indentation)

If the leg is involved, swelling generally begins distally at the foot, then progresses proximally upwards to the ankle, calf and knee. In more severe instances the swelling can involve the whole leg up to the thigh.

Generalized body swelling, including the abdomen and back, have occurred.

Sometimes the first signs of lymphedema can be a change in an arm or leg or other affected area. Initially, skin will remain soft, but can progress to the limb becoming hot and red with the skin becoming hard and stiff. The lymph fluid that collects in the tissues can be quite uncomfortable.

Lymphedema Treatment

Lymphedema is caused by impaired transportation of lymph. Unfortunately this is a chronic condition that can be managed, but not cured. Planning the treatment program depends on the cause of the lymphedema.

If the initial signs and symptoms of swelling are caused by lymphangitis (infection), antibiotics would need to be prescribed. Treating an infection often reduces some of the swelling and/or discoloration.

If the lymphedema is not caused by infection, other causes should be found. Medications may or may not be helpful. Interventions may be used for managing lymphedema to help keep the swelling under control, reduce the possibility of acquiring a new infection or secondary skin changes. These interventions may include patient education, skin care, compression bandaging, compression garments, compression pumps, exercises, and manual lymphatic drainage. Combinations of treatment interventions have been called decongestive lymphatic therapy. These options can also help to maintain the motion and function of the affected limbs.

Patients are educated about their cause of lymphedema and precautions that they need to take. Dietary & positional issues should be addressed. The use of compression stockings or garments, or ace bandage wrapping may be used, but only with a doctor's instruction and supervision. Elevation of affected body parts, and specific exercises are often recommended to promote lymph drainage. Clients with lymphedema may need to follow individualized exercise programs developed by physical or occupational therapists.

There are no specific medications to treat lymphedema. Diuretics have been found to be ineffective and may actually exacerbate the condition. Other medicines have been tried, but there is no clear evidence of significant effectiveness with any particular drug.

Using Massage as Treatment

Manual lymphatic drainage is a specialized massage technique to help clear edema by facilitating lymph flow through lymph vessel collaterals and collecting ducts. Since the pressure is very low in lymph vessels, lymph drainage techniques are generally administered slowly & gently. Stretching of the skin, superficial fascia, and the lymphatic vessels is performed in the direction of lymph flow, and followed by a gentle release of the stretch. Superficial effleurage and superficial lymph drainage techniques are used to remove fluid and assist further drainage. Initially, the proximal areas are treated first to facilitate drainage from distal areas. This is followed by draining the distal areas, and working back proximally to the lymph ports. The sequence of strokes is repeated many times. Practitioners must be very gentle and patient doing this.

The basic strokes used in traditional massage styles (petrissage, effleurage, tapotement, vibration, and friction) are generally applied with more pressure than manual lymph drainage techniques. Lymphedema is always caused by mechanical insufficiency of the lymphatic system, which is unable to appropriately respond to an increase in lymphatic fluid loads. When applied appropriately to lymphedema, lymph drainage massage increases the activity of lymph vessels and moves interstitial fluid. Lymph drainage massage exerts little pressure on the skin and does not cause any increase in local arterial blood flow. This narrow function makes

it ideal for preventing the additional outward force on blood vessels that typically occurs with the enhanced circulation of traditional massage therapy. Increasing the circulation of a mechanically insufficient lymph system can easily increase the swelling.

When working with clients with lymphedema, traditional massage therapy is insufficient and could even exacerbate the problem. Training in Lymphatic Drainage is advised before treating any client that presents with lymphedema. Otherwise, good intentions could be detrimental.

Lymphedema Management

These suggestions may help with managing lymphedema:

Avoid puncturing or injuring the skin. Use first aid care if there is a break in the skin.

Avoid receiving vaccinations, injections, blood pressure monitoring, blood drawing or any type of intravenous insertions in an arm or affected extremity.

Avoid strenuous exertion, but exercise wearing compression garments (per doctor).

Exercise, but avoid straining any muscles

Avoid excessive heat, such as with sunburns and tanning, or hot baths and saunas.

Avoid wearing any tight-fitting clothing or jewelry.

It is important to use the affected limb for normal everyday activities, yet overuse can cause lymphedema to occur in some people. Follow these suggestions whenever possible:

Use affected arm or leg as normally as possible until fully healed, about 4 to 6 weeks after injury, surgery or radiation treatment.

Exercise regularly but do not strain. Before any strenuous exercise, such as weightlifting or tennis, talk with a doctor, nurse, or physical therapist about specific goals and limitations to decide what level of activity is appropriate. Ask if a fitted sleeve or stocking should be worn during strenuous activities or while flying.

If an arm or leg starts to ache, lie down and elevate it.

Avoid vigorous, repeated activities, heavy lifting, or pulling, or excessive repetitions.

Watch for early signs of infection: rash, red blotches, swelling, increased heat, tenderness, or fever. Call a doctor right away if there are signs of infection.

Avoid any trauma to the area affected. Trauma includes extreme temperature changes, repetitive movements against resistance (pushing or pulling), heavy lifting, and excessive exercise.

When to Refer to a Doctor

If the presence of lymphedema is new, its etiology should be determined by a doctor as soon as possible.

And clients should be encouraged to contact their physician if they have lymphedema in combination with any of the following:

Previous mastectomy

Previous lower abdominal surgery

Previous radiation treatments, or chemotherapy

The affected limb becomes red, painful or hot; wet weeping tissues

The affected limb develops open sores or areas of broken skin

Fever accompanying any swelling

Additionally, it is suggested that a bodyworker or therapist seek permission from the client's physician prior to performing bodywork if the client has:

A history of cancer - to make certain massage won't spread it.

Full body edema - is usually due to chronic cardiac, kidney, or liver problems and massage may place too much stress on that person's circulatory system.

Treating lymphedema is beneficial, but can be challenging to the massage therapist. Proper training in Lymphatic Drainage is crucial. Understanding the lymphatic system and drainage patterns will help the therapist treat these conditions of 'swelling' confidently and effectively.